



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,800	08/25/2006	Naoya Amino	21713-00035-US1	2201
30678 7590 01/20/2010 CONNOLLY BOVE LODGE & HUTZ LLP 1875 EYE STREET, N.W. SUITE 1100 WASHINGTON, DC 20006				
EXAMINER				
SCOTT, ANGELA C				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
01/20/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/590,800

Applicant(s)

AMINO ET AL.

Examiner

Angela C. Scott

Art Unit

1796

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/22)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's response of September 30, 2009 has been fully considered. Claim 10 has been amended and claims 10-13 are pending.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (US 2003/0139523) in view of Kawakami et al. (US 4,748,168).

Regarding claim 10, Nakamura et al. teaches a rubber composition (§85) comprising 100 parts by weight of rubber containing 50 to 90 parts by weight (§89) of a styrene-butadiene copolymer and another diene rubber such as natural rubber or polybutadiene (§88) and 1 to 50 parts by weight of a conjugated diene rubber gel (§89) that is preferably a styrene-butadiene rubber (§27-28) having a toluene swelling index of 16 to 70 (§85).

Nakamura et al. does not teach that the glass transition temperature (T_g) of the aromatic vinyl-conjugated diene copolymer rubber is from -40° C to -5° C and that the glass transition temperature of the rubber gel satisfies the following formula:

$$TgA - 8 < TgB < TgA + 8$$

However, Kawakami et al. teaches a blend of styrene-butadiene rubbers where one rubber has a T_g of from -20° C to -45° C (Col. 2, lines 20-25) and where the T_g of the other rubber component is close to that of the first rubber component. See Col. 2, lines 35-45 where components do not blend well when they have T_g about 20 degrees apart. Additionally, Table 2 and Table 3 show blends of two or three rubbers where the glass transition temperatures range from differences of about 11 degrees apart to as little as 3 degrees apart. This evidence shows that the glass transition temperatures should be close to one another for the rubbers to be compatible. Nakamura et al. and Kawakami et al. are analogous art because they are from the same field of endeavor, namely blends of styrene-butadiene rubber components. At the time of the invention, a person of ordinary skill in the art would have found it obvious to use a diene with a glass transition temperature being within ten degrees of glass transition temperature of the rubber gel, as taught by Kawakami et al., in the rubber composition, as taught by Nakamura et

al., and would have been motivated to do so in order to ensure full compatibility between the two rubber components (Col. 2, lines 32-38).

Regarding claim 11, Nakamura et al. additionally teaches a Mooney viscosity of 50 to 200 (¶82) with 105 and 122 being explicitly disclosed (Table 3).

Regarding claim 12, Nakamura et al. additionally teaches that the conjugated diene rubber gel contains 80 to 99% weight of conjugated diene monomer units, 1 to 20% by weight of aromatic vinyl monomer units, and 0% to 1.5% by weight of crosslinking monomer units (¶20) (polyfunctional vinyl monomer units) (¶37).

Regarding claim 13, Nakamura et al. additionally teaches that the rubber composition further contains 10 to 99% weight of silica and 1-90% weight of carbon black (¶99) out of 10-200 parts by weight of total filler (¶98). The carbon black has a nitrogen adsorption specific surface area of 5 m²/g to 200 m²/g (¶92).

Response to Arguments

Applicant's arguments filed September 30, 2009 have been fully considered but they are not persuasive.

Applicants argue that they have achieved unexpected results with their invention and point to examples in the specification as well as examples provided in two affidavits filed August 13, 2008 and September 30, 2009. In determining unexpected results, whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support." In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range. *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980). MPEP 716.02(d). In this case, the amounts used in the examples are not commensurate in scope with the claimed amounts. While all amounts need not be shown, an amount at each endpoint of the range, representative examples of amounts in between, and an amount outside of the claimed ranges are necessary to establish that the alleged unexpected results occur over the entire claimed ranges and do not occur outside of the claimed ranges. The examples shown do not meet this criteria.

Additionally, applicants again refer to other references, which at best, seem to contradict the teachings of Kawakami in that incompatibility is desired instead of compatibility. The question to be concerned with, however, is what would one of ordinary skill in the art learn from reading a combination of Nakamura and Kawakami. When these two references are taken together, the invention of the instant application is deemed obvious over the prior art of record.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571) 270-3303. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR

Art Unit: 1796

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1796

/A. C. S./
Examiner, Art Unit 1796
January 13, 2010